

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047932 A1

(51) International Patent Classification⁷: **G01V 3/11**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA; ZM, ZW.

(21) International Application Number:

PCT/AU2004/001555

(22) International Filing Date:

12 November 2004 (12.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003906218 12 November 2003 (12.11.2003) AU

(71) Applicant (for all designated States except US): **BHC CONSULTING PTY LTD [AU/AU]**; Lobethal Road, Basket Range, S.A. 5138 (AU).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventor; and

Published:

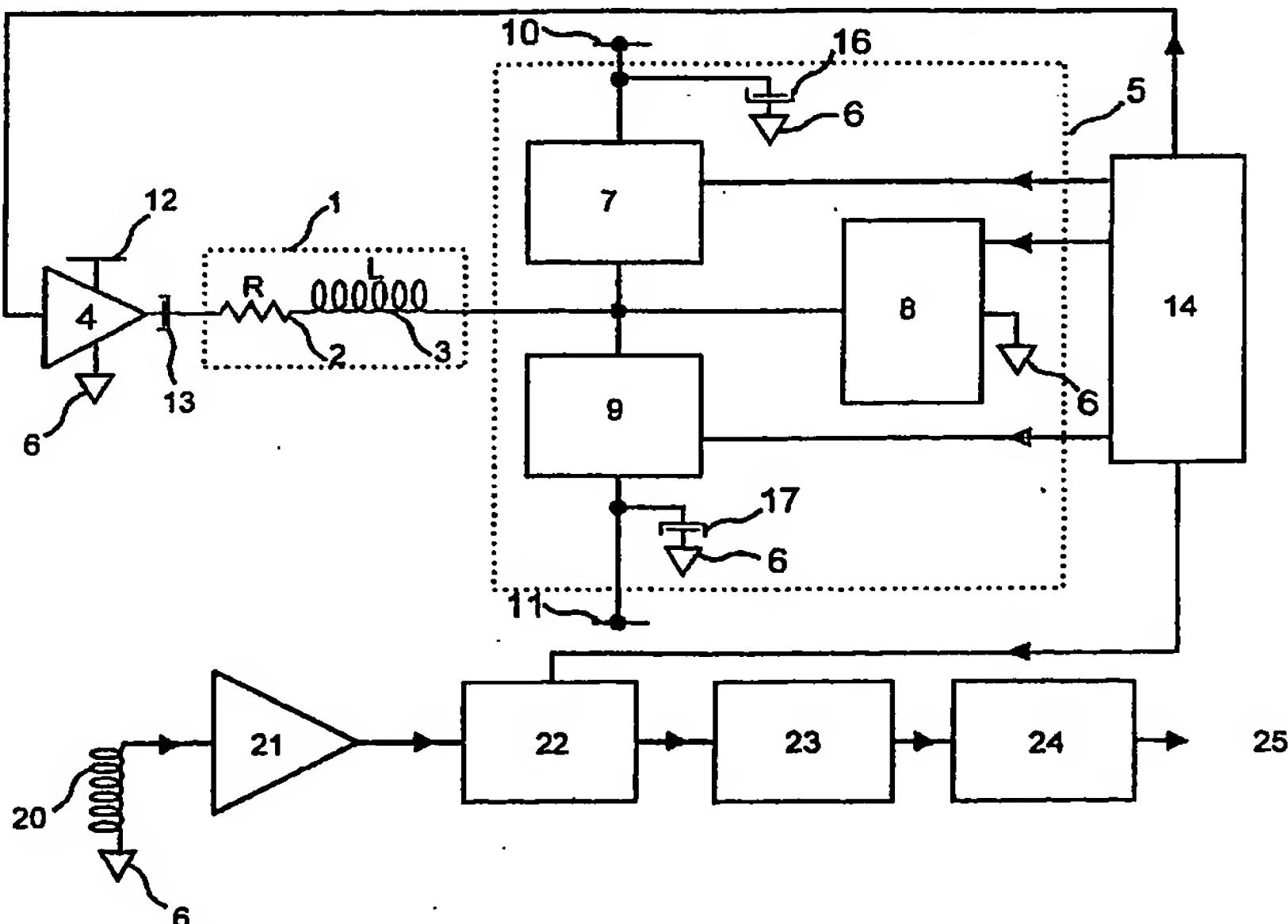
(75) Inventor/Applicant (for US only): **CANDY, Bruce, Hallcro** [AU/AU]; Lobethal Road, Basket Range, S.A. 5138 (AU).

— with international search report

(74) Agent: **COLLISON & CO**; 117 King William Street, Adelaide, S.A. 5000 (AU).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **MULTI-FREQUENCY METAL DETECTOR HAVING CONSTANT REACTIVE TRANSMIT VOLTAGE APPLIED TO A TRANSMIT COIL**



WO 2005/047932 A1

(57) Abstract: An electronic metal detector having a transmit coil (1) adapted to transmit an alternating magnetic field associated with a reactive transmit voltage, wherein the transmit voltage signal is selected such that the reactive transmit voltage is approximately constant for at least a time period during which a magnetic field signal to be processed is received by the detector for processing.